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THE PRINCIPLES OF DISEASE.

The Prevention of Disease. Translated from the German. With introduction by H. H. Bulstrode, M.A., M.D. Pp. xviii + 1063. (Westminster: A. Constable and Co., Ltd., 1902.) Price 31s. 6d. net.

IN all studies we are turning back to remoter and remoter causes, and to the investigation of origins; but, as we abstract and abstract, we are apt to get vaguer and vaguer, more and more are individual features merged in types, and in medicine we may find ourselves reduced at last to the emptiness of general counsels for a temperate and wholesome life. Nevertheless, the modern physician cannot be content with the knowledge that the patients under his care are victims of phthisis, of Bright's disease, of failing heart, of premature senile decay, and so forth, without a desire to learn the nature and direction of the processes by which such changes are initiated. As in but few instances he has discovered these small beginnings he is discontented; and it is well that he should be so. Our ancestors did not fail to see that diseases are moving things, so active that some demon or evil principle might be behind them; but this conception of activity, effective enough for instant purposes, contained no adequate notion of remote or latent causes. Some such notions may be traced in the ancient doctrines of the temperaments or diatheses, but were speculative and comparatively barren. Initial causes were, as we should expect, first observed and revealed in the infections, when a definite external pathogenic factor enters into a healthy or apparently healthy person; but even such events would seem to be very inconstant in their occurrence. Of two men exposed to such an attack, one would betray no sign of suffering, while the other would fall ill; an inconstancy indicating that the causation of an individual case of infection consists of far more than the intrusive element itself, which in some cases impinges upon a series of cooperating, in others of antagonistic causes. And if the patient succumbs, the outbreak of disorder is not immediate; a variable but specific interval elapses before its first manifestations. Now if from the recognised infections we turn to other diseases, we try to discover if some of these also arise from incidental agencies of a more occult kind, but having also their latent periods and gradual initiations. Others, again, may not be attributable to external elements, scarcely even as secondary and accelerating causes; but arise as later terms of processes implicit in the organism itself, perhaps even from the embryo.

Now the more definite and prevalent the outer causes, as in the more notable infectious diseases, the better is our position, if we can discover the laws of them, to take preventive and defensive measures on an extensive scale, and to entrust them to public physicians acting on behalf of individuals only as members of a community. On the other hand, the more a disease

is the outcome of individual and peculiar proclivities, the less are such public and universal precautions available against it. Public health may be secured by universal rules and enterprises, but the health of individuals, so far as it involves a study of the constitution of each one of them, must be a matter of private practice; though diseases such as phthisis, which arise from a cooperation of general and personal factors, need for their prevention a combination of public and private means.

In respect of epidemic infections, which can be studied on public lines, and have more definite causes and periods, much has been done in the way of prevention since the time of those first medical officers of health, the fetishman or voodoo; but, as Dr. Bulstrode says in his able preface to the volume before us, similar investigation of remote and initial causes, and the preventions to be based upon them when detected, have made but little way as yet in constitutional diseases. Indeed, Dr. Bulstrode goes so far as to suggest, justly as we think, that one of the uses of this book on the prevention of disease in its broader and yet more intimate sense, will be to force upon the notice of physicians that, meritorious as it is to stem the tide of established maladies, this function would be less and less in demand if our insight into and means of detection of their incipient terms were more largely developed. It is the chief merit of the work before us that, perhaps for the first time, our conception of preventive medicine is carried in a formal and imposing way beyond the sphere of the infections; and the first comprehensive attempt is made to apply preventive principles to the initial phases of all diseases.

The dangers of such an enterprise are obvious; when we leave conspicuous and specific phases of change, and seek for the more abstract and universal springs of disordered health, we run the risk of losing not only colour and vivacity, but grip and precision also. As we empty our conceptions of individual characters, we may lapse into platitude. In the construction then of a pioneer work on these broad lines, and on these remoter and vaguer conditions of disease, especial care should be taken to avoid such triviality, and to convince the reader that in tracing rivers to their sources the explorers have not lost themselves in a multitude of shallow rills and in a confusion of forests and watersheds. In this somewhat uncomely, and, seeing that illustrations were not needed, expensive volume, we think that the dangers we have indicated have not been avoided altogether. In a cooperative work we expect to find writers of very wide differences of merit; some good, some middling, some really trivial: but the jealous regard for precision and touch with nature which, as we have seen, should be the note of such a work, and the antidote to its summary methods, has not always been enforced by the editors. The introductory article on the history of the prevention of disease among the Hindoos, Chinese, Israelites, &c., was scarcely worth doing on so small a scale, and is certainly slight enough: it contains some interesting points; but others are not thought out, many statements are loose, and not a few

positively erroneous. We find, for example, the amazing statement that the *speculum vaginae* was unknown until a hundred years ago; yet of medical historians who could forget, at least, the *locus classicus* in Paul of Egina concerning this instrument in its valve and screw form, and the instructions for its use? In the same article we have dubious quotations from such still more dubious authors as "Tralus" (*sic* in text and index; for Alexander of Tralles?) and "Calomella" (a version redolent of the shop!), slips which do not reinforce our confidence in the author's general accuracy. If the editors are to blame for some of these oversights, they are surely still more to blame for passing sentences either so ignorant or so unfair as this:—

"It has been shown, by Koch and others, that malaria is conveyed largely, if not entirely, through the instrumentality of certain mosquitoes."

"Koch and others" is good. "Surmise," again, is far too feeble a word to indicate the epoch-making theory and practice of Semmelweiss in puerperal fever. The next article, by one Martins of Rostock—so he is called in the contents, index, and in all cross references—is a far abler one. We are disposed to attribute it to Prof. Martius. That we ourselves, and we are glad to observe Dr. Bulstrode also, differ profoundly from him in some important respects is not, of course, to be pressed to his disadvantage.

It would be impossible for us, even within limits far wider than the present, to discuss each of the many articles in turn, or, indeed, within the limits of leisure and patience, to read them all critically. For the most part the bread is too deeply drowned in sack. In many chapters there is little but some character of attenuation to distinguish the contents from the therapeutical sections of current text-books; while there is much to remind us of the lip medicine of the student, with his common formulas, such as that "the patient is to be put upon a light and nutritious diet," &c. In turning to the index for fresh light upon the initial causes of particular maladies, we find too often nothing, as in the case of gall-stones, pernicious anæmia, acute rheumatism,¹ scurvy and certain other maladies in which new knowledge seems to promise to be of high preventive value; or we find such vapid paragraphs as are given to arterial diseases, senile decay, dilatation of the stomach, &c.; or, again, equivocal names, such as "anæmia" undistinguished from chlorosis and other particular kinds of impoverished blood. Thus too often general views are attained only by slurring over essential differences. We have sought in vain, moreover, for recent observations on the geographical distribution of cancer; and for the significant fact of the prevalence of primary cancerous growths upon the surfaces of the body.

We are sorry we cannot speak with more appreciation of this important book; but we feel, as Dr. Windscheid, of Leipzig—the able author of the chapter on the prevention of diseases of the nervous system—

¹ For the recent views of the causation of rheumatism we searched the index and found a reference to p. 112, but failed there to find any such discussion. There are many errors in the index.

evidently does, that it is difficult to avoid falling, as some of his collaborators certainly have done, between the stool of specific detail and that of general gossip. However, that a work with such aims should appear at all is satisfactory; we could scarcely expect the first attempt to be one of full achievement. The translations, if slipshod at times, are, as the editors claim for them, readable English enough; but the editors have failed too frequently, whether in the text or by means of notes, to modify facts and opinions, as, for instance, in respect of the diet of the working classes, hours of labour, the management of schools and so forth, which, however true of German societies, are inapplicable to English conditions.

T. C. A.

ZOOLOGY FOR ARTISTS.

Anatomic artistique des Animaux. By Ed. Cuyer. Pp. xii+300; 143 figs. (Paris: J.-B. Baillière et fils, 1903.) Price 7.50 francs.

DOZENS of treatises on the anatomy of the human body have been written for the use of artists, but this is the first systematic attempt to place a knowledge of the structure of the more common mammals at their disposal. During the last ten years, M. Édouard Cuyer, who is a lecturer on anatomy at l'École nationale des Beaux-Arts, has been in the habit of adding to his ordinary lectures on the structure of the human body a number dealing with the anatomy of the mammals more commonly drawn by artists. The preparation of these lectures entailed much research, and hence this work, which is based on the lectures, not only treats comparative anatomy from a new point of view, but also contains a number of original observations. In this country M. Cuyer is best known as an illustrator of anatomical subjects; in this rôle he stands unrivalled, and the drawings which he has supplied for the work under review are the most accurate representations to be found in any work dealing with the anatomy of mammals.

No question has been more debated than the value of anatomy as an aid to art. Ruskin's dictum was that an artist should paint what he could see, not what he knew he ought to see; he even went further, and held that art was debased by a knowledge of anatomy. However that may be, one might have seen, a few years ago, Onslow Ford, Briton Rivière, and J. M. Swan, three of the most truthful and successful animal modellers and painters this generation has produced, dissecting and drawing, hour after hour, in the prosectorium in the Zoological Gardens at Regent's Park. M. Cuyer cites the great animal painter Barye as an example of an artist whose work has gained in force and precision by his accurate knowledge of anatomy. Anyone familiar with either the work of Barye or Swan will recognise that they are real zoologists who epitomise in their modellings and drawings the living and essential nature of the animals portrayed.

M. Cuyer presumes that the student is already familiar with the structure of the human body, which is made the basis for a comparative study of anatomy.